

REMARKS

Applicants appreciate the Examiner's thorough examination of the present application evidenced by the detailed Office Action mailed January 25, 2005. In response to the rejections of the claims, Applicants have amended independent Claims 1, 14, 24, 32, 36 and 40 to include recitations relating to use of *a common radio configuration having a common channel coding including a common spreading code*, recitations that are neither disclosed nor suggested by the cited U.S. Patent No. 6,567,666 to Czaja et al. (hereinafter "Czaja") and U.S. Patent Application Publication US2002/0085514 to Illidge et al. (hereinafter "Illidge"). Applicants have canceled Claims 4 and 19. Reasons supporting patentability of the claims are discussed below.

Independent Claim 1 and 36 are patentable over Czaja

Claims 1 and 36 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Czaja. Claim 1 has been amended to incorporate recitations from Claim 4 (also rejected as anticipated by Czaja) relating to use of common channel coding, along with specific recitation of use of a common spreading code. In particular, Claim 1 now recites:

A method of communicating with a wireless terminal, the method comprising:
communicating between the wireless terminal and a first node according to a first radio configuration of a first set of radio configurations supported by the first node;
identifying a second radio configuration available for a second node that supports a second set of radio configurations that is different from the first set of radio configurations; and
simultaneously communicating between the wireless terminal and respective ones of the first and second nodes according to the identified second radio configuration *using a common channel coding including a common spreading code*.

Claim 36 has been similarly amended. The amended recitations are supported by the application as filed, for example, at page 10, lines 9-12.

In rejecting Claims 1 and 36, the Office Action cites, in referring to Czaja, "a soft handoff (col. 2, ln. 29) or Make-Before-Break (col. 1, ln. 65) (simultaneously communicating), and a true handoff that combines signals (simultaneously communicating) from both generation systems before dropping (col. 2, ln. 55-56)." *Office Action*, p. 2. In rejecting Claim 4, which recites use of a common channel coding, the Office Action cites col. 3, lines 41-43 as teaching "operating with the same channel bandwidth." *Office Action*, p. 3.

The soft handoffs described at column 2, line 29 of Czaja include a first type of soft handoff in which a mobile station having at least three demodulator elements (fingers) in its rake receiver "may assign one of those fingers to a demodulated signal arriving from the 2G base station, while the remaining fingers demodulate the signal arriving from the 3G base station (or vice-versa)." *Czaja*, column 5, lines 14-17. In particular, "[t]he mobile station assigns one or more demodulating fingers to the 'other generation' base station signal, and it ***demodulates and decodes the information independently*** from the current assignment," (*Czaja*, column 5, lines 43-46, emphasis added), i.e., using different channel codings including different spreading codes. Therefore, this first type of soft handoff does not appear to include "simultaneously communicating between the wireless terminal and respective ones of the first and second odes according to the identified second radio configuration using a common channel coding including a common spreading code."

A second, "true" soft handoff described in Czaja may be used in cases in which "the coding rates of the two different signals are the same," and involves "assigning at least one finger to the 'other' generation signal, such that after the signals are demodulated and interleaved, the soft symbols are combined and decoded to produce an output bit." *Czaja*, column 6, lines 13-15 and lines 4-7. However, this second approach still involves *separate* demodulations, i.e., "the received signal is demodulated according to the modulation and spreading parameters of the respective base station." *Czaja*, column 6, lines 40-42. Thus, this "true handoff" mode also does not appear to include "simultaneously communicating between the wireless terminal and respective ones of the first and second odes according to the identified second radio configuration using a common channel coding including a common spreading code."

Although Applicants agree with the Office Action that column 3, lines 41-43 of Czaja discuss use of the same "channel bandwidth," this is not the same as a "common channel coding" as recited in the claims. Rather, the use of a common "channel bandwidth" described in Czaja refers to the use of the same portion of the radio spectrum by 2G and 3G systems. While these systems do use the same frequencies, both of the two types of soft handoffs described in Czaja, as discussed above, ***do not*** involve use of a ***common channel coding*** as recited in Claims 1 and 36. For at least these reasons, Applicants submit that amended Claims 1 and 36 are patentable over Czaja.

Independent Claims 14, 24, 32 and 40 are patentable over Illidge

Independent Claims 14, 24, 32 and 40 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Illidge. These claims have been amended to include recitations similar to those incorporated in Claims 1 and 36. For example, Claim 14 now recites:

A method of performing handoff of a wireless terminal from a first base station supporting a first set of radio configurations to a second base station supporting a second set of radio configurations that is different than the first set of radio configurations, the method comprising:

determining whether a common radio configuration ***having a common channel coding including a common spreading code*** is available for the first and second base stations; and

handing off the wireless terminal from the first base station to the second base station based on the determination of whether a common radio configuration is available for the first and second base stations.

Similar amendments have been made to Claims 24, 32 and 40.

In rejecting Claims 14 and 40, the Office Action cites paragraphs 27 and 28 of Illidge as teaching a soft handoff in which an IS-2000 call is switched to an IS-95 traffic channel. *Office Action*, p. 4. The cited passages from Illidge specifically describe transferring a high-speed packet data communication between two IS-2000 base stations or between an IS-2000 based station and a base station that supports circuit switched data communication under IS-95. Although Illidge describes a "soft handoff" between IS-2000 cells (see *Illidge*, paragraph [0028]), this transfer does not appear to occur between "a first base station supporting a first set of radio configurations" and "a second base station supporting a second set of radio configurations that is different than the first set of radio configurations." The transfer between an IS-2000 cell and an IS-95 cell appears to be a "hard" handoff that does not involve "simultaneous communication," i.e., Illidge states "the BSC 104 instructs the MS 114 to release the existing IS-2000 physical channel(s) and replace them with IS-95 physical channels." *Illidge*, paragraph [0029]. There is also no indication in Illidge that the IS-2000 and IS-95 stations provide a "common radio configuration having a common channel coding including a common spreading code." Moreover, in rejecting Claim 19 (which recites use of a common channel coding), the Office Action is incorrect in asserting that "it is inherent in a soft handoff to transmit information using the common radio configuration (a common

channel coding)." *Office Action*, p. 5. In fact, the above discussion of Czaja indicates how a soft handoff might occur without use of such a common radio configuration, which undermines the assertion that use of a common channel coding is "inherent" in any soft handoff process.

For at least the foregoing reasons, Applicants submit that independent Claims 14, 24, 32 and 40 are patentable over Illidge.

The dependent claims are patentable

Applicants submit that dependent Claims 2, 3, 5-13, 15-18, 20-23, 25-31, 33-35, 37-39 and 41-44 are patentable at least by virtue of the patentability of the various ones of independent Claims 1, 14, 24, 32, 36 and 40 from which they depend. Applicants further submit that several of these dependent claims are separately patentable.

For example, Claim 2, which stands rejected as unpatentable over a combination of Czaja and Illidge, recites:

. . . wherein a first one of the first and second sets of radio configurations is constrained to radio configurations that are compliant with a wireless communications standard, and wherein a second one of the first and second sets of radio comprises radio configurations compliant with the wireless communications standard and radio configurations that are non-compliant with the wireless communications standard.

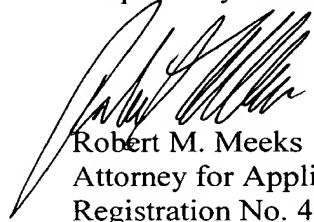
In rejecting Claim 2, the Office Action concedes that "Czaja fails to explicitly show a radio configuration compliant with a wireless communications standard and radio configuration non-compliant (Specification, p. 4, ln 1-2) with a wireless communications standard." *Office Action*, p. 7. Applicants agree that Czaja fails to provide this teaching, but submit that the cited paragraph [0028] of Illidge also fails to provide such a teaching. Rather, the cited paragraph [0028] merely describes determining whether or not a particular cell supports IS-2000, and says nothing about a cell with *both* compliant and non-compliant radio configurations. For at least this reason, Applicants submit that Claim 2 is separately patentable. Similar reasons support the separate patentability of Claims 3, 15, 16, 25, 26, 37, 38, 41 and 42.

In re: Wail Refai et al.
Serial No.: 09/754,490
Filing Date: January 4, 2001
Page 16 of 16

Conclusion

In light of the foregoing, Applicants submit that the claims as amended are patentable over the cited references. Therefore, Applicants submit that the claims are now in condition for allowance, and request allowance of the claims and passing of the application to issue in due course. Applicant encourages the Examiner to contact the undersigned by telephone to address any remaining issues.

Respectfully submitted,



Robert M. Meeks
Attorney for Applicant
Registration No. 40,723

USPTO Customer No. 20792
Myers Bigel Sibley & Sajovec
Post Office Box 37428
Raleigh, North Carolina 27627
Telephone: 919/854-1400
Facsimile: 919/854-1401

Certificate of Mailing under 37 CFR 1.8

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on April 21, 2005.



Candi L. Riggs